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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BOWDITCH & DEWEY, LLP
161 WORCESTER ROAD
P.O. BOX 9320
FRAMINGHAM, MA 01701-9320

EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/997,694

Applicant(s)

COWLEY ET AL.

Examiner

MONZER R CHORBAJI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This final office action is in response to the amendment received on 08/04/2003

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, applicant uses the term "the emitter is a stripper". The specification does not explain how such a structure can perform two functions, which are emitting and stripping. The emitter is a broad term to include a nozzle; yet a nozzle is not necessary a stripper.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 1-11 and 14-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblatt et al (U.S.P.N. 4,681,739) in view of Hedman et al (U.S.P.N. 6,327,812).

With regard to claim 1 Rosenblatt et al discloses a method for fumigating an enclosed volume (col.4, lines 26-27) that contains contents requiring fumigation (col.3, lines 22-23). Rosenblatt teaches the following: climatizing the enclosed volume (col.4, lines 13-16), generating chlorine dioxide gas from a source which represent a generator (col.6, lines 1-3), introducing the chlorine dioxide gas into the enclosed volume to be fumigated such that an emitter is required to let the gas in the enclosed volume (col.6, lines 12-14), distributing the chlorine dioxide gas in the enclosed volume (col.4, lines 23-25), maintaining a residual amount of chlorine dioxide gas into the enclosed volume at a level (col.4, lines 20-23) and duration (col.4, lines 23-25) to penetrate the contents, and removing the chlorine dioxide gas from the enclosed volume (col.6, lines 21-24).

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Rosenblatt fails to teach restoring habitability to an enclosed volume that was previously habitable. Hedman et al discloses fumigating buildings (col.1, lines 5-7) by using ozone (col.3, lines 46-49) which was previously habitable and also teaches of removing ozone from buildings (figure 1, 22, 24, and 26) after completing treatment of the building (restoring habitability). Thus, it would have been obvious to one having ordinary skill in the art to substitute one known sterilant (ozone) for another (chlorine dioxide) since chlorine dioxide sterilizes at short exposure times and at near ambient temperature and near ambient pressures (Rosenblatt et al, col.2, lines 67-68 and col.3, lines 1-2).

With respect to claims 2 and 18 Rosenblatt et al removes chlorine dioxide gas from the enclosed volume (col.6, lines 21-23) and then flushes the emitter and the enclosed volume with filtered inert gas (col.6, lines 21-24). Since Rosenblatt et al teaches that in one embodiment one stream is used to introduce and exhaust the sterilant (col.4, lines 47-50), then when purging occurs, the filtered inert gas will also include the chlorine dioxide generator. In addition, scrubbing of chlorine dioxide gas is disclosed in Rosenblatt et al (col.6, lines 24-27). Further, Rosenblatt et al produces chlorine dioxide gas (stripper) from a liquid solution (col.6, lines 1-11) and introduces chlorine dioxide gas into the enclosed volume using in one embodiment only one stream (col.4, lines 47-50).

With respect to claims 3-4 Rosenblatt et al generates chlorine dioxide gas from an aqueous solution of chlorine dioxide gas in a liquid (col.6, lines 1-7).

With respect to claims 5-6 since Rosenblatt et al teaches that in one embodiment only one stream is used (col.4, lines 47-50). Then the stream (emitter) introduces

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chlorine dioxide into the enclosed volume and scrubs chlorine dioxide after the end of a sterilization cycle. Thus, the emitter is a stripper (col.6, lines 21-27).

With respect to claims 7-10, 14, and 24, Rosenblatt et al teaches the following: adjusting both the relative humidity and the temperature (col.3, lines 59-61 and col.4, lines 13-15), intrinsically avoids condensation by monitoring and controlling the dew point within the enclosed volume (col.4, lines 56-61), and reducing the level of illumination (col.5, lines 19-21).

With respect to claim 11, Hedman et al teaches fumigating a building or an enclosed portion thereof (col.2, lines 50-52).

With respect to claims 15-17, 19-20, 25-30, and 34-35 Rosenblatt et al method intrinsically involves such steps. See col.4, lines 20-26.

With respect to claims 21-23 and 31-33 Rosenblatt et al teaches the following: The enclosed volume undergoes a vacuum (col.4, lines 34-35), the chlorine dioxide solution inherently has an equilibrium partial pressure (col.6, lines 1-7), the sterilant gas penetrates the contents in the enclosed volume (abstract, lines 1-10), and the enclosed volume requiring fumigation is contaminated with any type of spore (abstract, lines 11-13) including Bacillus Anthracis. Furthermore, Rosenblatt et al disclose various gram-positive spores (col.6, lines 48-51).

With respect to claims 36-37, Rosenblatt et al teaches that in one embodiment only one stream is used (col.4, lines 47-50) to introduce the sterilant into the enclosed volume and to scrub the sterilant from the enclosed volume (col.6, lines 12-24). In

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addition, Rosenblatt et al remove the sterilant by a detoxification treatment (col.6, lines 24-27).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblatt et al (U.S.P.N. 4,681,739) in view of Hedman et al (U.S.P.N. 6,327,812) and further in view of Smith et al (U.S.P.N. 4,780,333).

With respect to claim 12, both Rosenblatt et al and Hedman et al fail to provide a vehicle as an example for the enclosed volume. However, Smith et al teaches treating a vehicle (col.6, lines 32-36). Thus, it would have been obvious to one having ordinary skill in the art to modify the Rosenblatt et al and the Hedman et al methods to include treating a vehicle since there is an established relationship between respiratory ailment symptom and automobile air conditioning (Smith et al, col.1, lines 52-54).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblatt et al (U.S.P.N. 4,681,739) in view of Hedman et al (U.S.P.N. 6,327,812) and further in view of Halaby, Jr. (U.S.P.N. 4,272,019).

With respect to claim 13, both Rosenblatt et al and Hedman et al fail to teach distributing the sterilant by using heating ventilation and an air conditioning system. However, Halaby, Jr. teaches distributing deodorants and insecticides using an air conditioning system (col.11, lines 5-14 and lines 24-29). Thus, it would have been obvious to one having ordinary skill in the art to modify the Rosenblatt et al and the Hedman et al methods to include using air conditioning systems in order to gain access to another area to be treated (Halaby, Jr., col.11, lines 26-29).

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9. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblatt et al (U.S.P.N. 4,681,739) in view of Hedman et al (U.S.P.N. 6,327,812) and further in view of Spink (U.S.P.N. 5,565,180).

With respect to claim 38, both Rosenblatt et al and Hedman et al fail to teach removing the sterilant using an aqueous mixture of a bisulfite and caustic. However, Spink teaches that the use of an aqueous mixture of a bisulfite and caustic (col.20, lines 11-16) is known for treating gases including chlorine dioxide (col.14, lines 40-44 and col.19, lines 28-32). Thus, it would have been obvious to one having ordinary skill in the art to substitute one known detoxification process (Rosenblatt et al, col.6, lines 24-27) for another (Spink, col.20, lines 11-16) since such an aqueous mixture removes chlorine dioxide gas from emissions (Spink, col.19, lines 30-32).

Response to Arguments

10. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

On page 17 of the remarks, applicant argues, "As recognized in the office action, Rosenblatt fails to restore habitability". Rosenblatt et al does fail to teach restoring habitability, however, the Hedman et al reference is combined to show that fumigating buildings (col.1, lines 5-7) is known in the art. Furthermore, such buildings were obviously previously habitable, also the Hedman et al reference teaches removing ozone from buildings (figure 1, 22, 24, and 26) after completing treatment (restoring habitability). As a result, it would have been obvious to one having ordinary skill in the art to substitute one known sterilant (ozone) for another (chlorine dioxide) since chlorine

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dioxide sterilizes at short exposure times and at near ambient temperature and near ambient pressures (Rosenblatt et al, col.2, lines 67-68 and col.3, lines 1-2).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (703) 305-3605. The examiner can normally be reached on M-F 8:30-5:00.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (703) 308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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15. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744

Robert J. Warden, Sr.
ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700